

February 28, 2011

Kathleen Billingsley  
 Assistant Executive Officer  
 400 Q Street – 2<sup>nd</sup> Floor  
 Sacramento, California 95814

RE: Actuarial Valuation of CalPERS' Long-Term Care Program as of June 30, 2010 –  
 Updated Using Policies Inforce and Fund Balance as of December 31, 2010

Dear Ms. Billingsley,

We have updated our annual valuation as of June 30, 2010 using data as of December 31, 2010. The purpose of this letter and attachments is to briefly present the results of this update.

#### **Executive Summary**

As a follow-up to the annual valuation, we were asked to provide updates to the valuation using revised inforce data as of 12/31/2010 to monitor the impact of the approved premium rate increases and to demonstrate the progress of achieving the desired margin. Positive investment experience contributed to better than expected results; however, the ongoing rate increases are still needed to meet the desired level of margin.

A summary of the progression of the margin/deficit since the 6/30/2010 annual valuation is shown below. Please note the results shown below are explained in greater detail in the following pages.

Valuation Date	Results	Investment / Discount Rate
6/30/2010 with 7/1/10 rate increase	24.25%	7.79%
6/30/2010 with 7/1/10 rate increase	(2.98%)	6.38%
6/30/2010 with 7/1/10 rate increase/smooth from 6.38%	(18.85%)	5.50%
<b>7/1/2010 Rate Increase</b>		
9/30/2010 with 7/1/10 rate increase	29.16%	7.79%
9/30/2010 with 7/1/10 rate increase	0.10%	6.38%
9/30/2010 with 7/1/10 rate increase/smooth from 6.38%	(16.90%)	5.50%
12/31/2010 with 7/1/10 rate increase	32.57%	7.79%
12/31/2010 with 7/1/10/ rate increase	3.04%	6.38%
12/31/2010 with 7/1/10 rate increase/smooth from 6.38%	(14.31%)	5.50%

Given the results of this valuation and the supporting analyses, we recommend the following actions:

- Continue to support the CalPERS investment staff in the development of the investment strategy for the LTC program;
- Determine appropriate margin after the investment strategy is confirmed or revised, and continue with the ongoing premium rate increases until the desired margin is met;
- Consider allowing new entrants into the LTC program after the desired margins are set, the premium rate increases to meet these margins are approved, and progress is made towards achieving the desired margin with implemented rate increases; and,
- Monitor emerging experience and report to CalPERS staff on a quarterly basis regarding actual versus projected experience.

### **Background**

United Health Actuarial Services, Inc. (UHAS) was retained by the California Public Employees' Retirement System (CalPERS) Long-Term Care (LTC) Program to perform an actuarial valuation of CalPERS' LTC operations as of June 30, 2010 along with supporting analyses. Specifically, our assignment was to develop a projection of future cash flows and to evaluate the adequacy of current assets and premium levels based on those cash flows. As a follow-up to the annual valuation, we were asked to provide updates to the valuation using revised inforce data as of 12/31/2010 to monitor the impact of the approved premium rate increases and to demonstrate the progress of achieving the desired margin.

The 2010 annual valuation reported the "base case" deficit as (86.52%) without the approved rate increases, (2.98%) deficit with the approved rate increases and corresponding assumptions, and (18.85%) deficit with the approved rate increases and corresponding assumptions but with a decreasing investment/discount rate consistent with that underlying the development of the rate increases approved by CalPERS' Board in December of 2009. The approved rate increases are summarized below:

- LTC Program premium increases effective on July 1, 2010, for the following:
  - 22% for members with LTC1 and LTC2 policies and inflation protection;
  - 22% for members with LTC1 and LTC2 policies and lifetime coverage but without inflation protection; and,
  - 15% for all other members.
- LTC Program annual premium increases of 5% beginning July 1, 2011, for those members with LTC1 policies with lifetime coverage and inflation protection.

### **Approach and Methodology for the 12/31/2010 Updated Valuation**

To perform the December 31, 2010 updated valuation, we made the following adjustments to the June 30, 2010 projections.

- We removed the 2010 assumed rate increase adjustments effective July 1, 2010.
- We substituted the inforce data as of December 31, 2010 for the corresponding inforce data as of June 30, 2010. The updated inforce data includes premiums which reflect the actual July 1, 2010 rate increase implementation.
- For those members who, because of their billing mode, had not received the rate increase as of December 31, 2010, we made premium adjustments to account for the delay in the implementation of their rate increase.
- We removed the assumed shock lapses and conversions associated with the 2010 implemented rate increase because the updated inforce would reflect actual shock lapses and conversions. Please note that any additional conversions and shock lapses would likely have a net positive impact on the Program.
- We updated the administrative expenses based on a revised contract with Univita, which included two-years without inflation adjustments.
- We updated the model to reflect the revised valuation date, including inflation adjustments for expenses where applicable.
- We recalculated the claim reserves for those currently on claim and for those assumed to be on claim but not yet reported as of December 31, 2010.
- We updated the fund balance with data supplied by CalPERS staff.

### **Comparison of Actual to Projected Results**

The actual cash flows from 6/30/2010 to 12/31/2010 are greater than the corresponding projected cash flows from the 6/30/2010 valuation by approximately \$285.2 million. Both premiums and expenses were lower than projected, but they were within 5% of their projected values. The investment returns during this six month period were \$293.3 million greater than projected, causing most of the variation in results.

Key assumptions for the 6/30/2010 annual valuation were shock lapses and conversions, and the actual rates for these assumptions were consistent with the assumed values. A comparison of the actual-to-expected rates is in Attachment A.

### **Results**

Before updating fund balance with the better than projected investment results, the valuation result as of December 31, 2010 had a deficit of (6.11%), which corresponds to the “base case” scenario from the June 30, 2010 valuation with the deficit of (2.98%) (i.e., Scenario A(1b)). These updated results are not as favorable as projected because the inflation conversions were fewer than expected. Updating the fund to the actual December 31, 2010 balance, the revised December 31, 2010 margin is 3.04%. These results were obtained by using an investment discount rate of a level 6.38%, which is consistent with the base case A(1b) scenario in the annual valuation. These results and additional scenarios are summarized below:

Valuation Date and Scenario	Results	Investment/Discount Rates
6/30/2010 for “base case” A(1b), i.e. financial reporting results	(2.98%)	Level 6.38%
6/30/2010 for “base case” A(1c)	(18.85%)	Level 6.38% grading to 5.50% by 2018
6/30/2010 for scenario A(2b)	24.25%	Level 7.79%
9/30/2010 comparable to “base case” A(1b) <b>with</b> the updated Fund Balance	0.10%	Level 6.38%
9/30/2010 comparable to “base case” A(1c) <b>with</b> the updated Fund Balance	(16.90%)	Level 6.38% grading to 5.50% by 2018
9/30/2010 comparable to scenario A(2b) <b>with</b> the updated Fund Balance	29.16%	Level 7.79%
12/31/2010 comparable to “base case” A(1b) <b>without</b> the updated Fund Balance	(6.11%)	Level 6.38%
12/31/2010 comparable to “base case” A(1b) <b>with</b> the updated Fund Balance	3.04%	Level 6.38%
12/31/2010 comparable to “base case” A(1c) <b>with</b> the updated Fund Balance	(14.31%)	Level 6.38% grading to 5.50% by 2018
12/31/2010 comparable to scenario A(2b) <b>with</b> the updated Fund Balance	32.57%	Level 7.79%

In recent discussions with CalPERS Staff, we were provided with revised investment assumptions for the current portfolio mix. This new expected returns are consistent with the Retirement Plan’s methodology recently developed for their long range projection. The expected return for the LTC Program is 6.38% for the next ten years and 7.48% thereafter. This is consistent with a level return of 6.92%. The revised projection result using these revised investment/discount rates increases the margin from 3.04% to 15.87%.

The chart below shows results under these alternate scenarios valued at December 31, 2010.

December 31, 2010 Updated Valuation Under Alternate Investment / Discount Rates		
Valuation Discount Rate	A(1b) With Approved Rate Increases	Notes
6.38%	3.04%	Uses updated Fund Balance as of 12/31/2010
6.38% (years 1-10) 7.48% (years 11+)	15.87%	Uses updated Fund Balance as of 12/31/2010

Detailed projection results – using either the projected fund balance or the actual December 31, 2010 Fund Balance as noted above – are shown in Attachment B. A comparison of inforce data at June 30, 2010 and at December 31, 2010 is shown on Attachment C.

Please note the premium rate increase analysis completed in December 2009 set a goal of a 10% margin to be achieved by 2018, and the rate increase analysis also included an industry investment portfolio mix with an ultimate investment/discount rate of 5.50%.

Additional scenarios showing the impact of stopping the ongoing premium rate increases at various points in time and using various investment/discount rates are shown below.

Ongoing Premium Rate Increases	Surplus / (Deficit) Investment/Discount Rates		
	6.38% (1 – 10) 7.48% (11+)	Level 6.38%	6.38% grading to 5.5% by 2018
Continue	15.87%	3.04%	(14.31%)
Last Increase 7/2022	10.02%	(4.10%)	(23.02%)
Last Increase 7/2014	(4.61%)	(20.48%)	(41.72%)
No Ongoing Increases	(25.52%)	(43.38%)	(67.19%)

### **Recommendations**

Given the results of this valuation and the supporting analyses, we recommend the following actions:

- Continue to support the CalPERS investment staff in the development of the investment strategy for the LTC program;
- Determine appropriate margin after the investment strategy is confirmed or revised, and continue with the ongoing premium rate increases until the desired margin is met;
- Consider allowing new entrants into the LTC program after the desired margins are set, the premium rate increases to meet these margins are approved, and progress is made towards achieving the desired margin with implemented rate increases; and,
- Monitor emerging experience and report to CalPERS staff on a quarterly basis regarding actual versus projected experience.

### **Caveats and Limitations**

All caveats and limitations applicable to the annual valuation and report are applicable to this valuation update and report as well.


### Conclusions

Please feel free to contact us directly to discuss anything presented in this report. Our contact information is shown below.

Sincerely,

A handwritten signature in black ink, appearing to read 'Karl G. Volkmar', with a stylized, cursive script.

Karl G. Volkmar, FSA, MAAA, FCA  
Principal & Consulting Actuary  
(317) 575-7672  
[kvolkmar@uhasinc.com](mailto:kvolkmar@uhasinc.com)

A handwritten signature in black ink, appearing to read 'Clark A. Heitkamp', with a stylized, cursive script.

Clark A. Heitkamp, FSA, MAAA, LTCP  
Consulting Actuary  
(402) 289-1171  
[cheitkamp@uhasinc.com](mailto:cheitkamp@uhasinc.com)

### Attachments:

Attachment A - Comparison of Actual-to-Expected Shock Lapses and Conversions  
Attachments B(1) through B(4) – Detailed Projections  
Attachment C – Distributions of Business Inforce June 30, 2010 and December 31, 2010

# **Attachment A**

## **Comparison of Actual-to-Expected Shock Lapses and Conversions**

The June 30, 2010 valuation report assumed shock lapses and voluntary reductions in benefits resulting from the 2010 rate increases. As noted above, we updated the annual valuation with December 31, 2010 inforce data which effectively replaced the 2010 shock lapses and benefit reduction assumptions with actual experience.

The following tables summarize assumed shock lapses and conversions utilized in the June 30, 2010 valuation report, and the corresponding actual values are shown.

### **Shock Lapses Relating to the 2010 Rate Increase**

Attained Age	Assumed	Actual	Actual-to-Expected
< 60	2.00%	2.01%	101%
60 – 69	1.25%	1.05%	84%
70 – 79	0.50%	0.46%	92%

### **Conversions Relating to the 2010 Rate Increase**

#### ***Inflation to Non-inflation***

Assumed	Actual	Actual-to-Expected
10%	0.0%	0.0%

The option to drop the inflation coverage was not offered in the rate increase letters and therefore very few if any members chose this option in conjunction with the implementation of the rate increase.

#### ***Lifetime to Six-Year and Three-Year Benefit Periods***

Assumed	Actual	Actual-to-Expected
10%	10.6%	106%

Of those that converted from lifetime, nearly a quarter of them converted to three-year benefit period instead of the six-year benefit period. The three-year benefit period has lower expected claims compared to the six-year benefit, and thus the projected claims are lower than expected as a result of these conversions.

*Decrease in Maximum Daily Benefit Amount*

Assumed	Actual
0%	1.98% Reduction

As mentioned in the June 30, 2010 valuation report, decreases in the maximum daily benefit amounts were not modeled because they were not expected to have a significant impact to the results. The reduction of nearly 2% of the maximum daily benefits will decrease projected future claims.



## **Attachment B**

Attachment B(1) – Deficit (6.11%)

6/30/2010 projected fund balance for 12/31/2010 with updated inforce data and level 6.38% investment/discount rate

Attachment B(2) – Margin 3.04%

Updated fund balance as of 12/31/2010 with updated inforce data and level 6.38% investment/discount rate

Attachment B(3) – Deficit (14.31%)

Updated fund balance as of 12/31/2010 with updated inforce data and 6.38% investment/discount rate grading to 5.50% by 2018

Attachment B(4) – Margin 32.57%

Updated fund balance as of 12/31/2010 with updated inforce data and data and level 7.79% investment/discount rate

Attachment B(5) – Margin 15.87%

Updated fund balance as of 12/31/2010 with updated inforce data and 6.38% investment/discount rate for projection years 1 – 10 and 7.48% for projection years 11+

**Attachment B(1)**  
**Base Case w/ Projected Starting Fund Balance From 6/30/2010 Valuation - 6.38% Discount Rate for All Years**

**California Public Employees Retirement System**  
 Summary of Projected Values  
 All Plans

Surplus/(Deficit) \$ = PV (Fund Balance + Earnings):	(190,487,871)	= Standard Program Definition					Investment Rate 1/1/2011-12/31/2020:	Annual
Surplus/(Deficit) \$ as a Percentage of PV(Premiums):	-6.11%	= Standard Program Definition					Investment Rate 1/1/2021-12/31/2070:	6.38%
Fund Balance @ End of Projection:	(8,101,020,226)	100.00%			100.00%			
Totals - 7/2010 thru 6/2070:	5,693,929,284	20,391,377,029	80,304,737	770,969,862	(15,548,722,344)	4,681,992,826		
As a % of Premiums:	100.00%	358.12%	1.41%	13.54%	-273.08%	82.23%		
Totals - Present Values:	3,117,650,421	5,717,686,274	51,206,101	304,955,209	(2,956,197,163)	3,826,829,766		
As a % of PV(Premiums):	100.00%	183.40%	1.64%	9.78%	-94.82%	122.75%		

Months	Year	Lives	Total Premiums	LTC Paid Claims	RoP Claims	Total Expenses	Earnings	Investment Earnings	Fund Balance
1-12	2011	152,568	324,596,249	160,037,051	5,668,795	17,965,388	140,925,015	181,681,285	2,765,709,292
1-12	2012	148,105	316,459,928	183,203,582	5,796,364	18,460,029	108,999,952	201,195,939	3,088,315,592
1-12	2013	143,552	307,893,336	205,732,261	5,879,706	19,079,365	77,202,004	220,015,001	3,398,511,484
1-12	2014	138,938	299,159,519	235,544,782	6,044,884	19,714,733	37,855,120	237,703,669	3,695,728,489
1-12	2015	134,280	290,356,908	256,370,190	5,893,430	20,391,936	7,701,352	254,281,052	3,971,287,278
1-12	2016	129,574	281,323,424	276,201,742	5,658,350	21,097,531	(21,634,199)	270,063,760	4,233,269,682
1-12	2017	124,794	271,879,969	296,580,110	5,380,562	21,644,609	(51,725,312)	284,951,608	4,481,699,243
1-12	2018	119,940	262,033,426	316,256,904	5,006,766	22,132,281	(81,362,526)	298,875,401	4,714,925,539
1-12	2019	115,048	251,878,898	334,615,882	4,550,482	22,573,556	(109,861,022)	311,832,993	4,932,438,414
1-12	2020	110,147	241,428,290	353,839,601	4,108,157	22,998,982	(139,518,451)	323,778,806	5,134,410,385
1-12	2021	105,243	230,736,338	375,115,356	3,705,377	23,420,428	(171,504,823)	334,519,391	5,318,670,739
1-12	2022	100,322	219,875,226	397,391,376	3,333,428	23,775,797	(204,625,374)	343,858,590	5,481,685,308
1-12	2023	95,379	208,868,236	418,918,564	2,928,549	24,033,941	(237,012,817)	351,694,968	5,620,918,523
1-12	2024	90,444	197,783,243	438,881,759	2,517,820	24,207,735	(267,824,071)	358,013,899	5,735,600,674
1-12	2025	85,552	186,656,159	459,135,213	2,169,633	24,328,765	(298,977,452)	362,773,825	5,825,790,502
1-12	2026	80,713	175,522,172	481,293,845	1,891,261	24,404,518	(332,067,452)	365,791,272	5,889,586,875
1-12	2027	75,921	164,449,415	503,954,225	1,658,518	24,386,078	(365,549,406)	366,863,150	5,923,310,695
1-12	2028	71,172	153,495,807	524,468,260	1,425,472	24,236,397	(396,634,322)	365,928,856	5,924,624,439
1-12	2029	66,487	142,696,441	541,645,938	1,198,308	23,962,074	(424,109,879)	363,064,711	5,893,918,973
1-12	2030	61,897	132,075,211	557,404,186	1,002,759	23,595,314	(449,927,047)	358,332,642	5,832,873,805
1-12	2031	57,398	121,648,291	573,706,721	852,024	23,233,628	(476,144,082)	351,646,973	5,741,279,400
1-12	2032	52,993	111,437,789	590,166,474	733,935	22,825,675	(502,288,295)	342,854,478	5,616,782,291
1-12	2033	48,691	101,526,083	603,697,073	621,044	22,274,164	(525,066,199)	331,919,501	5,457,348,474
1-12	2034	44,508	91,969,333	612,603,504	507,364	21,583,956	(542,725,492)	331,919,501	5,264,201,776
1-12	2035	40,476	82,775,697	618,579,753	399,793	20,782,198	(556,986,047)	304,238,391	5,040,469,933
1-12	2036	36,624	74,017,654	623,400,406	312,535	19,897,971	(569,593,258)	287,690,035	4,787,722,277
1-12	2037	32,960	65,756,032	625,982,027	250,597	18,935,704	(579,412,296)	269,357,896	4,505,819,053
1-12	2038	29,488	58,044,284	623,219,497	200,927	17,891,777	(583,267,916)	249,401,555	4,195,764,653
1-12	2039	26,219	50,896,152	613,933,957	156,533	16,768,923	(579,963,262)	228,153,904	3,861,898,292
1-12	2040	23,178	44,312,658	600,124,246	117,246	15,600,032	(571,528,866)	205,940,105	3,510,088,934
1-12	2041	20,380	38,312,937	583,976,685	85,732	14,430,368	(560,179,849)	182,948,729	3,144,500,173
1-12	2042	17,821	32,905,880	565,231,720	63,270	13,279,905	(545,669,014)	159,309,158	2,767,269,053
1-12	2043	15,492	28,082,790	542,477,490	48,712	12,146,098	(526,589,511)	135,225,406	2,380,909,196
1-12	2044	13,386	23,817,438	515,437,353	37,327	11,023,323	(502,680,565)	110,978,508	1,989,545,091
1-12	2045	11,501	20,066,594	485,728,774	28,743	9,927,879	(475,618,803)	86,822,641	1,597,843,034
1-12	2046	9,829	16,797,107	455,298,683	21,532	8,887,053	(447,410,162)	62,898,748	1,209,046,871
1-12	2047	8,355	13,971,227	425,219,051	15,625	7,912,433	(419,175,882)	39,253,367	824,535,458
1-12	2048	7,065	11,553,344	395,071,102	11,327	7,012,627	(390,541,712)	15,909,640	444,612,943
1-12	2049	5,937	9,500,852	364,208,359	8,016	6,182,294	(360,897,817)	(7,065,896)	69,980,871
1-12	2050	4,957	7,763,060	333,074,937	5,357	5,413,128	(330,730,361)	(29,593,809)	(297,982,842)
1-12	2051	4,113	6,299,806	302,800,282	3,454	4,703,899	(301,207,829)	(51,647,547)	(658,307,012)
1-12	2052	3,391	5,076,948	274,398,112	2,303	4,057,572	(273,381,039)	(73,273,517)	(1,011,162,388)
1-12	2053	2,779	4,063,502	247,654,737	1,439	3,477,984	(247,070,659)	(94,554,986)	(1,357,816,944)
1-12	2054	2,261	3,231,449	221,882,575	818	2,961,395	(221,613,339)	(115,545,150)	(1,699,442,588)
1-12	2055	1,827	2,551,904	197,027,064	375	2,503,961	(196,979,496)	(136,274,600)	(2,036,601,077)
1-12	2056	1,464	1,999,017	173,493,155	86	2,102,383	(173,596,608)	(156,791,568)	(2,369,855,173)
1-12	2057	1,166	1,553,107	151,706,062	-	1,752,830	(151,905,785)	(177,176,905)	(2,700,243,349)
1-12	2058	921	1,196,784	131,834,103	-	1,449,566	(132,086,885)	(197,537,574)	(3,029,326,039)
1-12	2059	723	915,152	113,793,868	-	1,188,488	(114,067,203)	(217,990,205)	(3,358,950,498)
1-12	2060	564	699,791	97,448,694	-	966,443	(97,715,346)	(238,650,899)	(3,691,007,906)
1-12	2061	436	535,554	82,735,941	-	779,686	(82,980,073)	(259,637,978)	(4,027,374,150)
1-12	2062	336	406,804	69,639,841	-	625,064	(69,858,101)	(281,074,554)	(4,369,992,201)
1-12	2063	257	306,806	58,188,372	-	498,334	(58,379,900)	(303,093,366)	(4,720,924,856)
1-12	2064	195	229,740	48,328,199	-	395,118	(48,493,577)	(325,835,377)	(5,082,398,121)
1-12	2065	147	170,775	39,904,966	-	311,502	(40,045,694)	(349,443,906)	(5,456,727,075)
1-12	2066	110	126,086	32,754,524	-	244,086	(32,872,523)	(374,060,692)	(5,846,216,675)
1-12	2067	82	92,411	26,742,174	-	189,785	(26,839,548)	(399,827,015)	(6,253,149,890)
1-12	2068	60	67,197	21,724,102	-	146,501	(21,803,406)	(426,884,572)	(6,679,816,453)
1-12	2069	44	48,462	17,537,423	-	112,072	(17,601,033)	(455,374,259)	(7,128,504,431)
1-12	2070	32	34,595	14,054,196	-	84,601	(14,104,202)	(485,436,300)	(7,601,479,724)
									(8,101,020,226)

**Attachment B(2)**  
**Base Case w/ Updated Fund Balance - 6.38% Discount Rate for All Years**

**California Public Employees Retirement System**  
Summary of Projected Values  
All Plans

									Investment Rate 1/1/2011-12/31/2020:	Annual
									Investment Rate 1/1/2021-12/31/2070:	6.38%
Surplus/(Deficit) \$ =	PV (Fund Balance + Earnings):	94,746,046	=	Standard Program Definition						
Surplus/(Deficit) \$ as a Percentage of PV(Premiums):		3.04%	=	Standard Program Definition						
Fund Balance @ End of Projection:		3,561,712,562		100.00%		100.00%				
Totals - 1/2011 thru 12/2070:		5,693,929,284		20,391,377,029	80,304,737	770,969,862	(15,548,722,344)	16,059,491,697		
As a % of Premiums:		100.00%		358.12%	1.41%	13.54%	-273.08%	282.05%		
Totals - Present Values:		3,117,650,421		5,717,686,274	51,206,101	304,955,209	(2,956,197,163)	4,882,565,451		
As a % of PV(Premiums):		100.00%		183.40%	1.64%	9.78%	-94.82%	156.61%		

Months	Year	Lives	Total Premiums	LTC Paid Claims	RoP Claims	Total Expenses	Earnings	Investment Earnings	Fund Balance
1-12	2011	152,568	324,596,249	160,037,051	5,668,795	17,965,388	140,925,015	199,879,209	3,050,943,209
1-12	2012	148,105	316,459,928	183,203,582	5,796,364	18,460,029	108,999,952	220,554,891	3,391,747,433
1-12	2013	143,552	307,893,336	205,732,261	5,879,706	19,079,365	77,202,004	240,609,053	3,721,302,276
1-12	2014	138,938	299,159,519	235,544,782	6,044,884	19,714,733	37,855,120	259,611,622	4,039,113,334
1-12	2015	134,280	290,356,908	256,370,190	5,893,430	20,391,936	7,701,352	277,586,732	4,336,580,077
1-12	2016	129,574	281,323,424	276,201,742	5,658,350	21,097,531	(21,634,199)	294,856,342	4,621,868,161
1-12	2017	124,794	271,879,969	296,580,110	5,380,562	21,644,609	(51,725,312)	311,325,958	4,895,090,305
1-12	2018	119,940	262,033,426	316,256,904	5,006,766	22,132,281	(81,362,526)	326,932,434	5,154,690,951
1-12	2019	115,048	251,878,898	334,615,882	4,550,482	22,573,556	(109,861,022)	341,680,065	5,400,260,859
1-12	2020	110,147	241,428,290	353,839,601	4,108,157	22,998,982	(139,518,451)	355,530,121	5,632,079,902
1-12	2021	105,243	230,736,338	375,115,356	3,705,377	23,420,428	(171,504,823)	368,296,440	5,848,091,571
1-12	2022	100,322	219,875,226	397,391,376	3,333,428	23,775,797	(204,625,374)	379,790,614	6,044,883,189
1-12	2023	95,379	208,868,236	418,918,564	2,928,549	24,033,941	(237,012,817)	389,919,456	6,220,048,429
1-12	2024	90,444	197,783,243	438,881,759	2,517,820	24,207,735	(267,824,071)	398,677,109	6,372,955,068
1-12	2025	85,552	186,656,159	459,135,213	2,169,633	24,328,765	(298,977,452)	406,031,348	6,503,808,106
1-12	2026	80,713	175,522,172	481,293,845	1,891,261	24,404,518	(332,067,452)	411,808,625	6,610,862,002
1-12	2027	75,921	164,449,415	503,954,225	1,658,518	24,386,078	(365,549,406)	415,816,410	6,690,603,175
1-12	2028	71,172	153,495,807	524,468,260	1,425,472	24,236,397	(396,634,322)	418,005,335	6,740,870,179
1-12	2029	66,487	142,696,441	541,645,938	1,198,308	23,962,074	(424,109,879)	418,463,669	6,762,241,192
1-12	2030	61,897	132,075,211	557,404,186	1,002,759	23,595,314	(449,927,047)	417,266,053	6,756,594,981
1-12	2031	57,398	121,648,291	573,706,721	852,024	23,233,628	(476,144,082)	414,340,336	6,723,933,987
1-12	2032	52,993	111,437,789	590,166,474	733,935	22,825,675	(502,288,295)	409,547,677	6,662,130,241
1-12	2033	48,691	101,526,083	603,697,073	621,044	22,274,164	(525,066,199)	402,867,726	6,569,389,623
1-12	2034	44,508	91,969,333	612,603,504	507,364	21,583,956	(542,725,492)	394,468,372	6,447,191,150
1-12	2035	40,476	82,775,697	618,579,753	399,793	20,782,198	(556,986,047)	384,528,400	6,298,934,030
1-12	2036	36,624	74,017,654	623,400,406	312,535	19,897,971	(569,593,258)	373,102,547	6,126,476,383
1-12	2037	32,960	65,756,032	625,982,027	250,597	18,935,704	(579,412,296)	360,219,726	5,929,985,671
1-12	2038	29,488	58,044,284	623,219,497	200,927	17,891,777	(583,267,916)	346,060,370	5,710,793,102
1-12	2039	26,219	50,896,152	613,933,957	156,533	16,768,923	(579,963,262)	330,979,551	5,473,585,555
1-12	2040	23,178	44,312,658	600,124,246	117,246	15,600,032	(571,528,866)	315,326,029	5,224,601,844
1-12	2041	20,380	38,312,937	583,976,685	85,732	14,430,368	(560,179,849)	299,313,474	4,968,399,007
1-12	2042	17,821	32,905,880	565,231,720	63,270	13,279,905	(545,669,014)	283,097,974	4,707,532,633
1-12	2043	15,492	28,082,790	542,477,490	48,712	12,146,098	(526,589,511)	266,911,949	4,444,961,593
1-12	2044	13,386	23,817,438	515,437,353	37,327	11,023,323	(502,680,565)	251,066,652	4,185,284,030
1-12	2045	11,501	20,066,594	485,728,774	28,743	9,927,879	(475,618,803)	235,848,409	3,933,670,117
1-12	2046	9,829	16,797,107	455,298,683	21,532	8,887,053	(447,410,162)	221,432,360	3,693,899,723
1-12	2047	8,355	13,971,227	425,219,051	15,625	7,912,433	(419,175,882)	207,901,424	3,467,921,921
1-12	2048	7,065	11,553,344	395,071,102	11,327	7,012,627	(390,541,712)	195,317,442	3,256,647,463
1-12	2049	5,937	9,500,852	364,208,359	8,016	6,182,294	(360,897,817)	183,788,124	3,061,423,193
1-12	2050	4,957	7,763,060	333,074,937	5,357	5,413,128	(330,730,361)	173,436,698	2,884,313,501
1-12	2051	4,113	6,299,806	302,800,282	3,454	4,703,899	(301,207,829)	164,336,306	2,727,019,837
1-12	2052	3,391	5,076,948	274,398,112	2,303	4,057,572	(273,381,039)	156,490,106	2,590,148,314
1-12	2053	2,779	4,063,502	247,654,737	1,439	3,477,984	(247,070,659)	149,867,556	2,473,257,381
1-12	2054	2,261	3,231,449	221,882,575	818	2,961,395	(221,613,339)	144,471,550	2,376,054,279
1-12	2055	1,827	2,551,904	197,027,064	375	2,503,961	(196,979,496)	140,331,166	2,298,912,490
1-12	2056	1,464	1,999,017	173,493,155	86	2,102,383	(173,596,608)	137,461,646	2,242,264,160
1-12	2057	1,166	1,553,107	151,706,062	-	1,752,830	(151,905,785)	135,849,663	2,206,129,197
1-12	2058	921	1,196,784	131,834,103	-	1,449,566	(132,086,885)	135,460,089	2,190,073,076
1-12	2059	723	915,152	113,793,868	-	1,188,488	(114,067,203)	136,252,709	2,193,446,280
1-12	2060	564	699,791	97,448,694	-	966,443	(97,715,346)	136,252,709	2,215,631,786
1-12	2061	436	535,554	82,735,941	-	779,686	(82,980,073)	138,192,714	2,256,109,154
1-12	2062	336	406,804	69,639,841	-	625,064	(69,858,101)	141,248,257	2,314,377,338
1-12	2063	257	306,806	58,188,372	-	498,334	(58,379,900)	145,388,222	2,389,907,460
1-12	2064	195	229,740	48,328,199	-	395,118	(48,493,577)	150,577,736	2,482,105,296
1-12	2065	147	170,775	39,904,966	-	311,502	(40,045,694)	156,779,941	2,590,391,661
1-12	2066	110	126,086	32,754,524	-	244,086	(32,872,523)	163,962,270	2,714,308,236
1-12	2067	82	92,411	26,742,174	-	189,785	(26,839,548)	172,100,797	2,853,536,510
1-12	2068	60	67,197	21,724,102	-	146,501	(21,803,406)	181,179,578	3,007,876,540
1-12	2069	44	48,462	17,537,423	-	112,072	(17,601,033)	191,190,241	3,177,263,375
1-12	2070	32	34,595	14,054,196	-	84,601	(14,104,202)	202,133,727	3,361,796,068
								214,020,695	3,561,712,562

**Attachment B(3)**  
**Base Case w/ Updated Fund Balance - Decreasing Discount Rate**

**California Public Employees Retirement System**  
 Summary of Projected Values  
 All Plans

Investment Rate 1/1/2011: Annual  
 Investment Rate 7/1/2018 - 12/31/2070: 6.38%  
 5.50%

Surplus/(Deficit) \$ = PV (Fund Balance + Earnings):	(465,376,365)	= Standard Program Definition
Surplus/(Deficit) \$ as a Percentage of PV(Premiums):	-14.31%	= Standard Program Definition
Fund Balance @ End of Projection:	(12,150,464,835)	100.00%
Totals - 1/2011 thru 12/2070:	5,693,929,284	20,391,377,029 80,304,737 770,969,862 (15,548,722,344) 347,314,300
As a % of Premiums:	100.00%	358.12% 1.41% 13.54% -273.08% 6.10%
Totals - Present Values:	3,252,403,382	6,387,698,747 52,706,188 328,318,021 (3,516,319,574) 3,365,633,919
As a % of PV(Premiums):	100.00%	196.40% 1.62% 10.09% -108.11% 103.48%

Months	Year	Lives	Total Premiums	LTC Paid Claims	RoP Claims	Total Expenses	Earnings	Investment Earnings	Fund Balance
1-12	2011	152,568	324,596,249	160,037,051	5,668,795	17,965,388	140,925,015	198,137,345	3,050,943,209
1-12	2012	148,105	316,459,928	183,203,582	5,796,364	18,460,029	108,999,952	214,728,488	3,713,734,010
1-12	2013	143,552	307,893,336	205,732,261	5,879,706	19,079,365	77,202,004	229,766,079	4,020,702,094
1-12	2014	138,938	299,159,519	235,544,782	6,044,884	19,714,733	37,855,120	242,836,795	4,301,394,009
1-12	2015	134,280	290,356,908	256,370,190	5,893,430	20,391,936	7,701,352	253,977,694	4,563,073,055
1-12	2016	129,574	281,323,424	276,201,742	5,658,350	21,097,531	(21,634,199)	263,502,103	4,804,940,959
1-12	2017	124,794	271,879,969	296,580,110	5,380,562	21,644,609	(51,725,312)	271,333,670	5,024,549,317
1-12	2018	119,940	262,033,426	316,256,904	5,006,766	22,132,281	(81,362,526)	277,434,642	5,220,621,433
1-12	2019	115,048	251,878,898	334,615,882	4,550,482	22,573,556	(109,861,022)	284,667,527	5,395,427,938
1-12	2020	110,147	241,428,290	353,839,601	4,108,157	22,998,982	(139,518,451)	293,470,417	5,549,379,903
1-12	2021	105,243	230,736,338	375,115,356	3,705,377	23,420,428	(171,504,823)	301,061,369	5,678,936,449
1-12	2022	100,322	219,875,226	397,391,376	3,333,428	23,775,797	(204,625,374)	307,270,956	5,781,582,030
1-12	2023	95,379	208,868,236	418,918,564	2,928,549	24,033,941	(237,012,817)	312,012,907	5,856,582,120
1-12	2024	90,444	197,783,243	438,881,759	2,517,820	24,207,735	(267,824,071)	315,276,580	5,904,034,629
1-12	2025	85,552	186,656,159	459,135,213	2,169,633	24,328,765	(298,977,452)	317,028,233	5,922,085,410
1-12	2026	80,713	175,522,172	481,293,845	1,891,261	24,404,518	(332,067,452)	317,112,217	5,907,130,175
1-12	2027	75,921	164,449,415	503,954,225	1,658,518	24,386,078	(365,549,406)	315,357,632	5,856,938,401
1-12	2028	71,172	153,495,807	524,468,260	1,425,472	24,236,397	(396,634,322)	311,718,224	5,772,022,303
1-12	2029	66,487	142,696,441	541,645,938	1,198,308	23,962,074	(424,109,879)	306,266,509	5,654,178,933
1-12	2030	61,897	132,075,211	557,404,186	1,002,759	23,595,314	(449,927,047)	299,062,260	5,503,314,146
1-12	2031	57,398	121,648,291	573,706,721	852,024	23,233,628	(476,144,082)	290,037,886	5,317,207,950
1-12	2032	52,993	111,437,789	590,166,474	733,935	22,825,675	(502,288,295)	279,068,656	5,093,988,312
1-12	2033	48,691	101,526,083	603,697,073	621,044	22,274,164	(525,066,199)	266,132,867	4,835,054,980
1-12	2034	44,508	91,969,333	612,603,504	507,364	21,583,956	(542,725,492)	251,370,958	4,543,700,446
1-12	2035	40,476	82,775,697	618,579,753	399,793	20,782,198	(556,986,047)	234,931,118	4,221,645,517
1-12	2036	36,624	74,017,654	623,400,406	312,535	19,897,971	(569,593,258)	216,852,914	3,868,905,173
1-12	2037	32,960	65,756,032	625,982,027	250,597	18,935,704	(579,412,296)	197,152,929	3,486,645,806
1-12	2038	29,488	58,044,284	623,219,497	200,927	17,891,777	(583,267,916)	175,977,765	3,079,355,654
1-12	2039	26,219	50,896,152	613,933,957	156,533	16,768,923	(579,963,262)	153,622,640	2,653,015,032
1-12	2040	23,178	44,312,658	600,124,246	117,246	15,600,032	(571,528,866)	130,373,912	2,211,860,079
1-12	2041	20,380	38,312,937	583,976,685	85,732	14,430,368	(560,179,849)	106,398,046	1,758,078,276
1-12	2042	17,821	32,905,880	565,231,720	63,270	13,279,905	(545,669,014)	81,809,364	1,294,218,626
1-12	2043	15,492	28,082,790	542,477,490	48,712	12,146,098	(526,589,511)	56,785,741	824,414,855
1-12	2044	13,386	23,817,438	515,437,353	37,327	11,023,323	(502,680,565)	31,569,965	353,304,255
1-12	2045	11,501	20,066,594	485,728,774	28,743	9,927,879	(475,618,803)	6,379,494	(115,935,054)
1-12	2046	9,829	16,797,107	455,298,683	21,532	8,887,053	(447,410,162)	(18,667,858)	(582,013,074)
1-12	2047	8,355	13,971,227	425,219,051	15,625	7,912,433	(419,175,882)	(43,536,904)	(1,044,725,860)
1-12	2048	7,065	11,553,344	395,071,102	11,327	7,012,627	(390,541,712)	(68,213,190)	(1,503,480,762)
1-12	2049	5,937	9,500,852	364,208,359	8,016	6,182,294	(360,897,817)	(92,645,322)	(1,957,023,901)
1-12	2050	4,957	7,763,060	333,074,937	5,357	5,413,128	(330,730,361)	(116,771,664)	(2,404,525,926)
1-12	2051	4,113	6,299,806	302,800,282	3,454	4,703,899	(301,207,829)	(140,577,173)	(2,846,310,928)
1-12	2052	3,391	5,076,948	274,398,112	2,303	4,057,572	(273,381,039)	(164,110,329)	(3,283,802,296)
1-12	2053	2,779	4,063,502	247,654,737	1,439	3,477,984	(247,070,659)	(187,451,453)	(3,718,324,408)
1-12	2054	2,261	3,231,449	221,882,575	818	2,961,395	(221,613,339)	(210,654,765)	(4,150,592,512)
1-12	2055	1,827	2,551,904	197,027,064	375	2,503,961	(196,979,496)	(233,755,079)	(4,581,327,087)
1-12	2056	1,464	1,999,017	173,493,155	86	2,102,383	(173,596,608)	(256,802,662)	(5,011,726,357)
1-12	2057	1,166	1,553,107	151,706,062	-	1,752,830	(151,905,785)	(279,876,019)	(5,443,508,161)
1-12	2058	921	1,196,784	131,834,103	-	1,449,566	(132,086,885)	(303,076,022)	(5,878,671,067)
1-12	2059	723	915,152	113,793,868	-	1,188,488	(114,067,203)	(326,511,534)	(6,319,249,804)
1-12	2060	564	699,791	97,448,694	-	966,443	(97,715,346)	(350,290,531)	(6,767,255,681)
1-12	2061	436	535,554	82,735,941	-	779,686	(82,980,073)	(374,522,464)	(7,224,758,218)
1-12	2062	336	406,804	69,639,841	-	625,064	(69,858,101)	(399,320,421)	(7,693,936,740)
1-12	2063	257	306,806	58,188,372	-	498,334	(58,379,900)	(424,805,244)	(8,177,121,884)
1-12	2064	195	229,740	48,328,199	-	395,118	(48,493,577)	(451,104,206)	(8,676,719,667)
1-12	2065	147	170,775	39,904,966	-	311,502	(40,045,694)	(478,345,852)	(9,195,111,213)
1-12	2066	110	126,086	32,754,524	-	244,086	(32,872,523)	(506,656,556)	(9,734,640,292)
1-12	2067	82	92,411	26,742,174	-	189,785	(26,839,548)	(536,161,447)	(10,297,641,287)
1-12	2068	60	67,197	21,724,102	-	146,501	(21,803,406)	(566,985,132)	(10,886,429,825)
1-12	2069	44	48,462	17,537,423	-	112,072	(17,601,033)	(599,250,578)	(11,503,281,436)
1-12	2070	32	34,595	14,054,196	-	84,601	(14,104,202)	(633,079,196)	(12,150,464,835)

**Attachment B(4)**  
**Base Case w/ Updated Fund Balance - 7.79% Discount Rate for All Years**

**California Public Employees Retirement System**  
 Summary of Projected Values  
 All Plans

									Investment Rate 1/1/2011-12/31/2020:	Annual
									Investment Rate 1/1/2021-12/31/2070:	7.79%
Surplus/(Deficit) \$ =	PV (Fund Balance + Earnings):	917,483,315	= Standard Program Definition							7.79%
Surplus/(Deficit) \$ as a Percentage of PV(Premiums):		32.57%	= Standard Program Definition							7.79%
Fund Balance @ End of Projection:		82,059,431,706	100.00%			100.00%				
Totals - 7/2010 thru 6/2070:		5,693,929,284	20,391,377,029	80,304,737	770,969,862	(15,548,722,344)	94,557,210,841			
As a % of Premiums:		100.00%	358.12%	1.41%	13.54%	-273.08%	1660.67%			
Totals - Present Values:		2,816,941,160	4,641,088,148	47,198,322	262,114,584	(2,133,459,894)	8,016,590,460			
As a % of PV(Premiums):		100.00%	164.76%	1.68%	9.30%	-75.74%	284.58%			

Months	Year	Lives	Total Premiums	LTC Paid Claims	RoP Claims	Total Expenses	Earnings	Investment Earnings	Fund Balance
1-12	2011	152,568	324,596,249	160,037,051	5,668,795	17,965,388	140,925,015	244,041,029	3,050,943,209
1-12	2012	148,105	316,459,928	183,203,582	5,796,364	18,460,029	108,999,952	272,728,990	3,435,909,253
1-12	2013	143,552	307,893,336	205,732,261	5,879,706	19,079,365	77,202,004	301,282,221	3,817,638,196
1-12	2014	138,938	299,159,519	235,544,782	6,044,884	19,714,733	37,855,120	329,214,259	4,196,122,421
1-12	2015	134,280	290,356,908	256,370,190	5,893,430	20,391,936	7,701,352	356,586,495	4,563,191,800
1-12	2016	129,574	281,323,424	276,201,742	5,658,350	21,097,531	(21,634,199)	383,829,320	4,927,479,648
1-12	2017	124,794	271,879,969	296,580,110	5,380,562	21,644,609	(51,725,312)	410,872,327	5,289,674,768
1-12	2018	119,940	262,033,426	316,256,904	5,006,766	22,132,281	(81,362,526)	437,685,066	5,648,821,784
1-12	2019	115,048	251,878,898	334,615,882	4,550,482	22,573,556	(109,861,022)	464,322,020	6,005,144,324
1-12	2020	110,147	241,428,290	353,839,601	4,108,157	22,998,982	(139,518,451)	490,789,314	6,359,605,322
1-12	2021	105,243	230,736,338	375,115,356	3,705,377	23,420,428	(171,504,823)	516,916,442	6,710,876,184
1-12	2022	100,322	219,875,226	397,391,376	3,333,428	23,775,797	(204,625,374)	542,531,180	7,056,287,804
1-12	2023	95,379	208,868,236	418,918,564	2,928,549	24,033,941	(237,012,817)	567,578,775	7,394,193,610
1-12	2024	90,444	197,783,243	438,881,759	2,517,820	24,207,735	(267,824,071)	592,114,177	7,724,759,567
1-12	2025	85,552	186,656,159	459,135,213	2,169,633	24,328,765	(298,977,452)	616,165,123	8,049,049,673
1-12	2026	80,713	175,522,172	481,293,845	1,891,261	24,404,518	(332,067,452)	639,591,434	8,366,237,344
1-12	2027	75,921	164,449,415	503,954,225	1,658,518	24,386,078	(365,549,406)	662,232,085	8,673,761,327
1-12	2028	71,172	153,495,807	524,468,260	1,425,472	24,236,397	(396,634,322)	684,103,195	8,970,444,005
1-12	2029	66,487	142,696,441	541,645,938	1,198,308	23,962,074	(424,109,879)	705,394,182	9,257,912,878
1-12	2030	61,897	132,075,211	557,404,186	1,002,759	23,595,314	(449,927,047)	726,285,972	9,539,197,181
1-12	2031	57,398	121,648,291	573,706,721	852,024	23,233,628	(476,144,082)	746,788,546	9,815,556,106
1-12	2032	52,993	111,437,789	590,166,474	733,935	22,825,675	(502,288,295)	766,836,640	10,086,200,569
1-12	2033	48,691	101,526,083	603,697,073	621,044	22,274,164	(525,066,199)	786,515,150	10,350,748,915
1-12	2034	44,508	91,969,333	612,603,504	507,364	21,583,956	(542,725,492)	806,147,149	10,612,197,866
1-12	2035	40,476	82,775,697	618,579,753	399,793	20,782,198	(556,986,047)	826,081,405	10,875,619,523
1-12	2036	36,624	74,017,654	623,400,406	312,535	19,897,971	(569,593,258)	846,528,459	11,144,714,880
1-12	2037	32,960	65,756,032	625,982,027	250,597	18,935,704	(579,412,296)	867,679,215	11,421,650,080
1-12	2038	29,488	58,044,284	623,219,497	200,927	17,891,777	(583,267,916)	889,922,025	11,709,917,000
1-12	2039	26,219	50,896,152	613,933,957	156,533	16,768,923	(579,963,262)	913,874,843	12,016,571,108
1-12	2040	23,178	44,312,658	600,124,246	117,246	15,600,032	(571,528,866)	940,168,673	12,350,482,689
1-12	2041	20,380	38,312,937	583,976,685	85,732	14,430,368	(560,179,849)	969,291,577	12,719,122,496
1-12	2042	17,821	32,905,880	565,231,720	63,270	13,279,905	(545,669,014)	1,001,682,468	13,128,234,224
1-12	2043	15,492	28,082,790	542,477,490	48,712	12,146,098	(526,589,511)	1,037,895,397	13,584,247,678
1-12	2044	13,386	23,817,438	515,437,353	37,327	11,023,323	(502,680,565)	1,078,605,822	14,095,553,563
1-12	2045	11,501	20,066,594	485,728,774	28,743	9,927,879	(475,618,803)	1,124,487,303	14,671,478,819
1-12	2046	9,829	16,797,107	455,298,683	21,532	8,887,053	(447,410,162)	1,176,107,840	15,320,347,320
1-12	2047	8,355	13,971,227	425,219,051	15,625	7,912,433	(419,175,882)	1,233,953,350	16,049,044,997
1-12	2048	7,065	11,553,344	395,071,102	11,327	7,012,627	(390,541,712)	1,298,515,286	16,863,822,465
1-12	2049	5,937	9,500,852	364,208,359	8,016	6,182,294	(360,897,817)	1,370,374,549	17,771,796,039
1-12	2050	4,957	7,763,060	333,074,937	5,357	5,413,128	(330,730,361)	1,450,167,946	18,781,272,771
1-12	2051	4,113	6,299,806	302,800,282	3,454	4,703,899	(301,207,829)	1,538,511,197	19,900,710,356
1-12	2052	3,391	5,076,948	274,398,112	2,303	4,057,572	(273,381,039)	1,635,976,826	21,138,013,724
1-12	2053	2,779	4,063,502	247,654,737	1,439	3,477,984	(247,070,659)	1,743,140,456	22,500,609,511
1-12	2054	2,261	3,231,449	221,882,575	818	2,961,395	(221,613,339)	1,860,665,714	23,996,679,308
1-12	2055	1,827	2,551,904	197,027,064	375	2,503,961	(196,979,496)	1,989,299,726	25,635,731,683
1-12	2056	1,464	1,999,017	173,493,155	86	2,102,383	(173,596,608)	2,129,828,699	27,428,051,912
1-12	2057	1,166	1,553,107	151,706,062	-	1,752,830	(151,905,785)	2,283,064,015	29,384,284,003
1-12	2058	921	1,196,784	131,834,103	-	1,449,566	(132,086,885)	2,449,854,661	31,515,442,233
1-12	2059	723	915,152	113,793,868	-	1,188,488	(114,067,203)	2,631,112,260	33,833,210,009
1-12	2060	564	699,791	97,448,694	-	966,443	(97,715,346)	2,827,829,183	36,350,255,066
1-12	2061	436	535,554	82,735,941	-	779,686	(82,980,073)	3,041,081,441	39,080,368,903
1-12	2062	336	406,804	69,639,841	-	625,064	(69,858,101)	3,272,032,243	42,038,470,271
1-12	2063	257	306,806	58,188,372	-	498,334	(58,379,900)	3,521,933,250	45,240,644,414
1-12	2064	195	229,740	48,328,199	-	395,118	(48,493,577)	3,792,133,917	48,704,197,764
1-12	2065	147	170,775	39,904,966	-	311,502	(40,045,694)	4,084,096,921	52,447,838,105
1-12	2066	110	126,086	32,754,524	-	244,086	(32,872,523)	4,399,411,970	56,491,889,332
1-12	2067	82	92,411	26,742,174	-	189,785	(26,839,548)	4,739,804,217	60,858,428,778
1-12	2068	60	67,197	21,724,102	-	146,501	(21,803,406)	5,107,143,700	65,571,393,447
1-12	2069	44	48,462	17,537,423	-	112,072	(17,601,033)	5,503,458,149	70,656,733,742
1-12	2070	32	34,595	14,054,196	-	84,601	(14,104,202)	5,930,945,051	76,142,590,858
									82,059,431,706

**Attachment B(5)**  
**Base Case w/ Updated Fund Balance - 6.38% Discount Rate for 10 Years, 7.48% Discount Rate for Years 11+**

**California Public Employees Retirement System**  
Summary of Projected Values  
All Plans

Surplus/(Deficit) \$ = PV (Fund Balance + Earnings):	485,314,115	= Standard Program Definition				Investment Rate 1/1/2011-12/31/2020:	Annual
Surplus/(Deficit) \$ as a Percentage of PV(Premiums):	15.87%	= Standard Program Definition				Investment Rate 1/1/2021-12/31/2070:	6.38%
Fund Balance @ End of Projection:	32,657,994,141	100.00%			100.00%		7.48%
Totals - 1/2011 thru 12/2070:	5,693,929,284	20,391,377,029	80,304,737	770,969,862	(15,548,722,344)	45,155,773,276	
As a % of Premiums:	100.00%	358.12%	1.41%	13.54%	-273.08%	793.05%	
Totals - Present Values:	3,057,589,306	5,280,936,197	50,749,291	291,532,912	(2,565,629,094)	6,231,262,794	
As a % of PV(Premiums):	100.00%	172.72%	1.66%	9.53%	-83.91%	203.80%	

Months	Year	Lives	Total Premiums	LTC Paid Claims	RoP Claims	Total Expenses	Earnings	Investment Earnings	Fund Balance
1-12	2011	152,568	324,596,249	160,037,051	5,668,795	17,965,388	140,925,015	199,879,209	3,050,943,209
1-12	2012	148,105	316,459,928	183,203,582	5,796,364	18,460,029	108,999,952	220,554,891	3,391,747,433
1-12	2013	143,552	307,893,336	205,732,261	5,879,706	19,079,365	77,202,004	240,609,053	3,721,302,276
1-12	2014	138,938	299,159,519	235,544,782	6,044,884	19,714,733	37,855,120	259,611,622	4,039,113,334
1-12	2015	134,280	290,356,908	256,370,190	5,893,430	20,391,936	7,701,352	277,586,732	4,336,580,077
1-12	2016	129,574	281,323,424	276,201,742	5,658,350	21,097,531	(21,634,199)	294,856,342	4,621,868,161
1-12	2017	124,794	271,879,969	296,580,110	5,380,562	21,644,609	(51,725,312)	311,325,958	4,895,090,305
1-12	2018	119,940	262,033,426	316,256,904	5,006,766	22,132,281	(81,362,526)	326,932,434	5,154,690,951
1-12	2019	115,048	251,878,898	334,615,882	4,550,482	22,573,556	(109,861,022)	341,680,065	5,400,260,859
1-12	2020	110,147	241,428,290	353,839,601	4,108,157	22,998,982	(139,518,451)	355,530,121	5,632,079,902
1-12	2021	105,243	230,736,338	375,115,356	3,705,377	23,420,428	(171,504,823)	431,806,639	5,848,091,571
1-12	2022	100,322	219,875,226	397,391,376	3,333,428	23,775,797	(204,625,374)	450,035,244	6,108,393,387
1-12	2023	95,379	208,868,236	418,918,564	2,928,549	24,033,941	(237,012,817)	467,166,804	6,353,803,257
1-12	2024	90,444	197,783,243	438,881,759	2,517,820	24,207,735	(267,824,071)	483,214,464	6,583,957,243
1-12	2025	85,552	186,656,159	459,135,213	2,169,633	24,328,765	(298,977,452)	498,162,057	6,799,347,636
1-12	2026	80,713	175,522,172	481,293,845	1,891,261	24,404,518	(332,067,452)	511,828,906	6,998,532,241
1-12	2027	75,921	164,449,415	503,954,225	1,658,518	24,386,078	(365,549,406)	524,011,345	7,178,293,695
1-12	2028	71,172	153,495,807	524,468,260	1,425,472	24,236,397	(396,634,322)	534,672,632	7,336,755,634
1-12	2029	66,487	142,696,441	541,645,938	1,198,308	23,962,074	(424,109,879)	543,938,460	7,474,793,947
1-12	2030	61,897	132,075,211	557,404,186	1,002,759	23,595,314	(449,927,047)	551,921,520	7,594,622,528
1-12	2031	57,398	121,648,291	573,706,721	852,024	23,233,628	(476,144,082)	558,565,272	7,696,617,001
1-12	2032	52,993	111,437,789	590,166,474	733,935	22,825,675	(502,288,295)	563,735,991	7,779,038,191
1-12	2033	48,691	101,526,083	603,697,073	621,044	22,274,164	(525,066,199)	567,439,067	7,840,485,887
1-12	2034	44,508	91,969,333	612,603,504	507,364	21,583,956	(542,725,492)	569,902,611	7,882,858,755
1-12	2035	40,476	82,775,697	618,579,753	399,793	20,782,198	(556,986,047)	571,372,244	7,910,035,873
1-12	2036	36,624	74,017,654	623,400,406	312,535	19,897,971	(569,593,258)	571,953,144	7,924,422,070
1-12	2037	32,960	65,756,032	625,982,027	250,597	18,935,704	(579,412,296)	571,723,804	7,926,781,956
1-12	2038	29,488	58,044,284	623,219,497	200,927	17,891,777	(583,267,916)	570,943,934	7,919,093,464
1-12	2039	26,219	50,896,152	613,933,957	156,533	16,768,923	(579,963,262)	570,084,057	7,906,769,482
1-12	2040	23,178	44,312,658	600,124,246	117,246	15,600,032	(571,528,866)	569,616,133	7,896,890,277
1-12	2041	20,380	38,312,937	583,976,685	85,732	14,430,368	(560,179,849)	569,862,974	7,894,977,544
1-12	2042	17,821	32,905,880	565,231,720	63,270	13,279,905	(545,669,014)	571,087,881	7,904,660,669
1-12	2043	15,492	28,082,790	542,477,490	48,712	12,146,098	(526,589,511)	573,651,594	7,930,079,536
1-12	2044	13,386	23,817,438	515,437,353	37,327	11,023,323	(502,680,565)	578,016,953	7,977,141,618
1-12	2045	11,501	20,066,594	485,728,774	28,743	9,927,879	(475,618,803)	584,629,034	8,052,478,007
1-12	2046	9,829	16,797,107	455,298,683	21,532	8,887,053	(447,410,162)	593,814,456	8,161,488,238
1-12	2047	8,355	13,971,227	425,219,051	15,625	7,912,433	(419,175,882)	593,814,456	8,307,892,531
1-12	2048	7,065	11,553,344	395,071,102	11,327	7,012,627	(390,541,712)	605,802,984	8,494,519,634
1-12	2049	5,937	9,500,852	364,208,359	8,016	6,182,294	(360,897,817)	620,810,565	8,724,788,487
1-12	2050	4,957	7,763,060	333,074,937	5,357	5,413,128	(330,730,361)	639,118,433	9,003,009,103
1-12	2051	4,113	6,299,806	302,800,282	3,454	4,703,899	(301,207,829)	661,039,063	9,333,317,805
1-12	2052	3,391	5,076,948	274,398,112	2,303	4,057,572	(273,381,039)	686,840,415	9,718,950,391
1-12	2053	2,779	4,063,502	247,654,737	1,439	3,477,984	(247,070,659)	716,722,959	10,162,292,311
1-12	2054	2,261	3,231,449	221,882,575	818	2,961,395	(221,613,339)	750,862,333	10,666,083,985
1-12	2055	1,827	2,551,904	197,027,064	375	2,503,961	(196,979,496)	789,488,770	11,233,959,416
1-12	2056	1,464	1,999,017	173,493,155	86	2,102,383	(173,596,608)	832,880,245	11,869,860,166
1-12	2057	1,166	1,553,107	151,706,062	-	1,752,830	(151,905,785)	881,317,163	12,577,580,720
1-12	2058	921	1,196,784	131,834,103	-	1,449,566	(132,086,885)	935,066,264	13,360,741,199
1-12	2059	723	915,152	113,793,868	-	1,188,488	(114,067,203)	994,389,662	14,223,043,977
1-12	2060	564	699,791	97,448,694	-	966,443	(97,715,346)	1,059,565,725	15,168,542,499
1-12	2061	436	535,554	82,735,941	-	779,686	(82,980,073)	1,130,902,986	16,201,730,139
1-12	2062	336	406,804	69,639,841	-	625,064	(69,858,101)	1,208,739,137	17,327,489,203
1-12	2063	257	306,806	58,188,372	-	498,334	(58,379,900)	1,293,440,372	18,551,071,475
1-12	2064	195	229,740	48,328,199	-	395,118	(48,493,577)	1,385,398,199	19,878,089,774
1-12	2065	147	170,775	39,904,966	-	311,502	(40,045,694)	1,485,033,691	21,314,629,888
1-12	2066	110	126,086	32,754,524	-	244,086	(32,872,523)	1,592,807,195	22,867,391,389
1-12	2067	82	92,411	26,742,174	-	189,785	(26,839,548)	1,709,226,061	24,543,744,927
1-12	2068	60	67,197	21,724,102	-	146,501	(21,803,406)	1,834,846,734	26,351,752,113
1-12	2069	44	48,462	17,537,423	-	112,072	(17,601,033)	1,970,277,356	28,300,226,063
1-12	2070	32	34,595	14,054,196	-	84,601	(14,104,202)	2,116,183,099	30,398,808,128
								2,273,290,215	32,657,994,141

# Attachment C

## CalPERS LTC Program Distributions of Business Inforce as of 6/30/2010 and 12/31/2010

By Issue-Age Band and Gender

Issue-Age Band	6/30/2010		12/31/2010		12/31/2010 / 6/30/2010	
	Average Issue Age					
	Females	Males	Females	Males	Females	Males
< 30	497	272	477	270	-4.0%	-0.7%
30-39	4,687	2,848	4,601	2,787	-1.8%	-2.1%
40-44	6,331	3,515	6,239	3,453	-1.5%	-1.8%
45-49	11,776	6,579	11,622	6,465	-1.3%	-1.7%
50-54	17,678	10,675	17,473	10,534	-1.2%	-1.3%
55-59	19,462	13,053	19,289	12,902	-0.9%	-1.2%
60-64	16,027	12,448	15,843	12,268	-1.1%	-1.4%
65-69	10,735	8,358	10,528	8,183	-1.9%	-2.1%
70-74	6,181	3,928	5,997	3,768	-3.0%	-4.1%
75-79	2,408	1,263	2,305	1,196	-4.3%	-5.3%
80-84	516	210	478	194	-7.4%	-7.6%
85-89	61	18	57	16	-6.6%	-11.1%
90-94	1	1	1	1	0.0%	0.0%
95+	-	-	-	-	-	-
Total	96,360	63,168	94,910	62,037	-1.5%	-1.8%
Grand Total		159,528		156,947		-1.6%

By Attained Age and Gender

Attained Age	6/30/2010		12/31/2010		12/31/2010 / 6/30/2010	
	Average Attained Age					
	Females	Males	Females	Males	Females	Males
28	10	1	-	-	-100.0%	-100.0%
29	7	4	9	1	28.6%	-75.0%
30	9	5	6	4	-33.3%	-20.0%
31	13	6	7	5	-46.2%	-16.7%
32	18	11	13	6	-27.8%	-45.5%
33	27	12	17	11	-37.0%	-8.3%
34	67	38	26	12	-61.2%	-68.4%
35	56	41	65	38	16.1%	-7.3%
36	62	33	55	40	-11.3%	21.2%
37	94	43	60	33	-36.2%	-23.3%
38	90	59	92	41	2.2%	-30.5%
39	94	64	86	59	-8.5%	-7.8%
40	134	90	89	62	-33.6%	-31.1%
41	171	89	133	88	-22.2%	-1.1%
42	237	170	162	86	-31.6%	-49.4%
43	487	302	228	164	-53.2%	-45.7%
44	561	354	472	297	-15.9%	-16.1%
45	502	313	555	345	10.6%	10.2%
46	473	289	490	304	3.6%	5.2%
47	469	315	466	282	-0.6%	-10.5%
48	1,008	597	461	310	-54.3%	-48.1%
49	1,622	907	990	583	-39.0%	-35.7%
50	1,162	695	1,602	892	37.9%	28.3%
51	786	470	1,142	682	45.3%	45.1%
52	793	430	774	460	-2.4%	7.0%
53	1,150	636	779	417	-32.3%	-34.4%
54	2,202	1,183	1,123	614	-49.0%	-48.1%
55	2,538	1,369	2,165	1,162	-14.7%	-15.1%
56	2,098	1,153	2,492	1,354	18.8%	17.4%
57	1,481	817	2,076	1,131	40.2%	38.4%
58	1,939	1,107	1,463	806	-24.5%	-27.2%
59	3,465	2,086	1,911	1,092	-44.8%	-47.7%
60	4,492	2,674	3,408	2,050	-24.1%	-23.3%
61	3,328	2,140	4,442	2,633	33.5%	23.0%
62	2,194	1,384	3,297	2,110	50.3%	52.5%
63	2,518	1,632	2,169	1,366	-13.9%	-16.3%
64	4,806	3,000	2,494	1,610	-48.1%	-46.3%
65	4,798	3,129	4,759	2,967	-0.8%	-5.2%
66	3,627	2,377	4,761	3,091	31.3%	30.0%
67	2,026	1,473	3,601	2,354	77.7%	59.8%
68	2,369	1,686	2,008	1,457	-15.2%	-13.6%
69	3,980	2,801	2,345	1,668	-41.1%	-40.4%
70	4,860	3,151	3,939	2,770	-19.0%	-12.1%
71	3,115	2,161	4,823	3,110	54.8%	43.9%
72	1,319	1,118	3,090	2,136	134.3%	91.1%
73	1,729	1,382	1,301	1,102	-24.8%	-20.3%
74	3,129	2,405	1,705	1,363	-45.5%	-43.3%
75	3,955	2,998	3,093	2,367	-21.8%	-21.0%
76	3,019	2,250	3,912	2,959	29.6%	31.5%
77	738	610	2,977	2,216	303.4%	263.3%
78	1,225	1,005	718	597	-41.4%	-40.6%
79	2,343	1,755	1,209	978	-48.4%	-44.3%
80	2,702	2,008	2,292	1,717	-15.2%	-14.5%
81	2,493	1,780	2,654	1,965	6.5%	10.4%
82	450	277	2,436	1,735	441.3%	526.4%
83	795	454	434	270	-45.4%	-40.5%
84	1,411	828	776	438	-45.0%	-47.1%
85	1,617	991	1,370	797	-15.3%	-19.6%
86	1,300	879	1,568	951	20.6%	8.2%
87	259	126	1,254	821	384.2%	551.6%
88	314	157	250	120	-20.4%	-23.6%
89	504	279	294	145	-41.7%	-48.0%
90	488	267	477	266	-2.3%	-0.4%
91	342	184	460	247	34.5%	34.2%
92	62	26	317	173	411.3%	565.4%
93	76	33	56	24	-26.3%	-27.3%
94	75	18	70	29	-6.7%	61.1%
95	50	28	68	16	36.0%	-42.9%
96	6	1	48	26	700.0%	2500.0%
97	2	1	6	-	200.0%	-100.0%
98	6	8	2	1	-66.7%	-87.5%
99	5	2	6	8	20.0%	300.0%
100	8	1	4	2	-50.0%	100.0%
101	-	-	8	1	-	-
Total	96,360	63,168	94,910	62,037	-1.5%	-1.8%
Grand Total		159,528		156,947		-1.6%

# Attachment C

## CalPERS LTC Program Distributions of Business Inforce as of 6/30/2010 and 12/31/2010

By Benefit Period and Elimination Period

<u>Benefit Period</u>	<u>Elimination Period</u>	<u>6/30/2010 Count</u>	<u>12/31/2010 Count</u>	<u>12/31/2010 / 6/30/2010</u>
6 Month	30 Day	8	184	2200.0%
1 Year	30 Day	2,195	2,303	4.9%
2 Year	30 Day	4,119	3,717	-9.8%
3 Year	90 Day	31,563	33,012	4.6%
6 Year	90 Day	8,715	15,176	74.1%
Lifetime	90 Day	112,928	102,555	-9.2%
<b>Total</b>		<b>159,528</b>	<b>156,947</b>	<b>-1.6%</b>

By Plan Type

<u>Plan Type</u>	<u>6/30/2010 Count</u>	<u>12/31/2010 Count</u>	<u>12/31/2010 / 6/30/2010</u>
Partnership (Comprehensive)	6,322	6,204	-1.9%
Comprehensive	120,149	118,290	-1.5%
Facilities Only	33,057	32,453	-1.8%
<b>Total</b>	<b>159,528</b>	<b>156,947</b>	<b>-1.6%</b>

By Inflation

<u>Inflation</u>	<u>6/30/2010 Count</u>	<u>12/31/2010 Count</u>	<u>12/31/2010 / 6/30/2010</u>
No Inflation	45,083	44,337	-1.7%
Inflation	114,445	112,610	-1.6%
<b>Total</b>	<b>159,528</b>	<b>156,947</b>	<b>-1.6%</b>

By Marital Status at time of Issue

<u>Marital Status</u>	<u>Gender</u>	<u>6/30/2010 Count</u>	<u>12/31/2010 Count</u>	<u>12/31/2010 / 6/30/2010</u>
Married	F	58,869	57,863	-1.7%
Married	M	50,259	49,292	-1.9%
Divorced	F	13,247	13,036	-1.6%
Divorced	M	3,745	3,674	-1.9%
Single	F	11,082	10,912	-1.5%
Single	M	5,436	5,338	-1.8%
Widowed	F	12,503	12,451	-0.4%
Widowed	M	2,836	2,848	0.4%
Unknown	F	651	640	-1.7%
Unknown	M	885	878	-0.8%
Separated	F	8	8	0.0%
Separated	M	7	7	0.0%
<b>Total</b>		<b>159,528</b>	<b>156,947</b>	<b>-1.6%</b>

By Premium Mode

<u>Premium Mode</u>	<u>6/30/2010 Count</u>	<u>12/31/2010 Count</u>	<u>12/31/2010 / 6/30/2010</u>
Monthly	121,292	119,665	-1.3%
Quarterly	29,563	28,799	-2.6%
Semi-Annually	5,053	4,956	-1.9%
Annually	3,620	3,527	-2.6%
<b>Total</b>	<b>159,528</b>	<b>156,947</b>	<b>-1.6%</b>

By Underwriting Type

<u>Underwriting Type</u>	<u>6/30/2010 Count</u>	<u>12/31/2010 Count</u>	<u>12/31/2010 / 6/30/2010</u>
LF	100,392	98,482	-1.9%
MGI	32,196	31,863	-1.0%
SF	26,940	26,602	-1.3%
<b>Total</b>	<b>159,528</b>	<b>156,947</b>	<b>-1.6%</b>

By Product Series

<u>Product Series</u>	<u>6/30/2010 Count</u>	<u>12/31/2010 Count</u>	<u>12/31/2010 / 6/30/2010</u>
LTC 1	133,243	131,070	-1.6%
LTC 2	9,391	9,207	-2.0%
LTC 3	16,894	16,670	-1.3%
<b>Total</b>	<b>159,528</b>	<b>156,947</b>	<b>-1.6%</b>